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nuclearattack

August 27th, 2004, 02:37 PM

Before the iDefence shutdown there was a thread on this subject, i decided to rewrite it because i'm making some test on this liquid dynamite and i think it is interesting.

Reassuming the concept:

my liquid straight dynamite is a mix of Ng and NM to a 60/40 NG/NM ratio or 50/50 ratio. In any case the mix is very powerfull and brisant and it cutted a steel bar very easy. I'm going to test it in shaped charges and i'll see if it works well as i expect. What are the advantages of this liquid dynamite?

- 1.It is liquid! This means that the detonator's shockwaves travels better in the main charge and this will give a better initiation.
- 2.It's perfect for shaped charges because a liquid is very uniform.
- 3.Easy to prepare.
- 4.Cheap.NG/NC jell is more powerfull but also more expensive, to make NC you need a lot of acids.
- 5.It's a straight dynamite! NM is an explosive too! You don't have power loss like in guhr dynamite.
- 6.Safe.

On the last point i need some suggestions:

NM is slightly acid. In the past thread someone wrote that this will sensitize NG, this could be dangerous for the safety of storage/handling.

I want to give my opinion on this:

i'm agree on this if you add only a bit of NM. But if you add a good quantity of NM (like in my ratio) the NG will be completely dissolved and it will be desensitized because NM is insensitive. I think it is like when you add acetone to NG to desensitize it for store safety.NM is also a solvent like acetone!

In a few words:

adding an insufficient quantity on NM will sensitize the NG because NM is a little acid.

adding a good quantity of NM (the NM should dissolve completely the NG) it will desensitize the NG and you have a powerfull straight dynamite!

Any suggestion is appreciated!

Dr.M

September 6th, 2004, 02:57 PM

Erm dude, if I get it right NG with a little amount of acid on it from the nutrition makes it unstable. And you want to ad acid :/ I could be wrong but I think if you mix those 2 and stir you will probably be blown to pieces..

Anyway I like the concept, but what if you mix the NM first with AN and add some NG.
Will prob be unstable too but a little bit more safe. Anyway good luck :)

Sarevok

September 6th, 2004, 11:11 PM

I don't think so, Dr. M. Ammonium nitrate is also a little acidic, but ammonium nitrate dynamites are safe to use. To store a mixture of nitromethane and NG for a time (instead of using it immediately after preparation), however, might be unwise.

I like nuclearattack's idea. I wonder if nitrobenzene can be used instead?

nuclearattack

September 8th, 2004, 12:28 PM

To Dr.M

with a good NM quantity the NG will be dissolved because NM is a solvent, Ng is in solution but is "dispersed" in NM.

The main question is: can solved NG detonate on its own without a shockwave? It's the same thing when you add acetone to NG, the NG is dissolved and it is less sensitive.

However i'm just making some NG to make some stability tests.

I'll do this tests in october because now i'm very busy but maybe i'll find some free time in september.

Those tests will dissolve any doubt and i'll post the results.

October 29th, 2004, 06:03 AM

Today i made a shock test for my liquid dynamite.

I pour some of this dynamite (1gr, 50/50 ratio NM/NG) in a glass test tube, waited for the 2 liquids to mix well and then i proceeded for the shock test.

I left it falling from 15 m high on a concrete floor. :eek:

I heard the test tube crashing in pieces but the dynamite didn't detonate. :)

Then i prepared another test tube with 1 gr of liquid dynamite and i hit it with a hammer...it didn't detonate! :D

Well! I'm happy about this test, now i know that this liquid dynamite is shock stable, perhaps not so stable like other kind of dynamites but it can be handle safely.

It is also easily detonable because, even if NM is insensitive, it lowers the NG viscosity and this guarantees a better shockwave propagation. For example EGDN and Myrol are less shock sensitive than NG but more easy to detonate because they are less viscous. This is what COPAE says. :)

I'm going to make a LSC with this dynamite...it should work perfectly. :cool:

me234

October 29th, 2004, 07:18 AM

Nuclearattack, my friend, I really want to know something.

How exactly did you position yourself when hitting a glass container containing explosives?

You wanted to know if it would go off right? So what would have happened to YOU if it had?

I do not intend offense, I am merely concerned with the health and safety of a fellow Forum member.

And I'm interested.

Maybe you could try pouring a gram onto something solid and then smacking it. This would certainly save you some glass test tubes.

P.S. I think your mix sounds pretty wicked!

nuclearattack

October 29th, 2004, 09:41 AM

Yes ME234 it's a wicked explosive! I made some demolition tests and it has a good brisance also on steel targets.

About the shock test i used a protective mask made for soft air, it is resistant and it is a sufficient protection for a small scale test like this, i also wear heavy gloves and hear protections to avoid damage on drums.

However the quantity tested is very small...only 1 gr and it isn't a real danger if you are using this kind of protections.

You can also use a polycarbonate transparent glass to protect you, at this point you have only your arm without heavy protection but as i said you should use small quantity of HE for the test. :)

cheers my friend!

nuclearattack

October 31st, 2004, 06:12 PM

Today i made a demolition test with this liquid dynamite, i used 130 gr of it in a glass jar, detonator made with 2 gr AP.

The target was a steel beam used for buildings steel structure, it is a very hard target and this beam was 1 cm thick of pure steel!

The charge was placed in a inner right side (the beam has a T form) with a tape. The steel beam was placed on the ground with an angle of 20 degrees and the charge was between the beam and the ground not on top of the beam.

When the charge went off it launched the beam at about 150 m away (the beam weight about 15 kg) and when the beam landed it penetrated the earth completely!

Awesome! I live for this moments!

The beam was heavily dented and it was ripped on a side but it was able to absorb some of the hit when it was launched away. I'm sure that if i had placed the charge on top of it, the beam would have been shattered and it wouldn't be able to absorb the energy released.

I have attached a small photo i took with my cell phone, the damage is visible, clearly not very well but it's sufficient to have an idea of the result.

I'm satisfied of this liquid dynamite, it's powerfull also against hard targets and it is very easy to initiate.

Test it! It's better than ANNM and easy to do, a good stuff for me!

nbk2000

November 1st, 2004, 06:29 PM

The picture is rather small, but approved anyways.

Pictures need to be LARGE enough to clearly see details, but SMALL enough to fit the limit and save our space.

FinnBell

November 1st, 2004, 11:16 PM

Man you should really invest in a digital camera, I'm just really wanting a closer look at that steel beam. Ive never detonated more than 100 grams of NG before and even those charges were crazy powerful. But then again Ive never tested on metal, only a telephone pole.(good stuff btw)

Marvin

November 2nd, 2004, 02:07 AM

nuclearattack,

Earlier in the post you seem to be confusing chemical stability with shock sensitivity.

I dont like the term 'liquid dynamite' either, the whole concept behind dynamite was to turn an explosive that was difficult to use being a liquid into a solid to make it safer. I'm also a little unsure what you are trying to get from the mixture. It seems to be doing little for its oxygan balance, are the only reasons to reduce sensitivity and stretch out a smaller amount of NG?

I'm inclined to think that in the case of NG the hazards lie more in its manufacture at home than in the subsiquent use of a more conventional NG based explosive mixture. NG/NC is not sane to make with homemade NC anyway. ANNM is still fairly brisant but you are forming a fairly safe explosive from 2 virtually inert chemicals. As liquid mixtures go this does look to be one of the better ones for home use, I'll concede that.

nuclearattack

November 2nd, 2004, 12:40 PM

To Finnbell:

yes man i need a digital camera but for the moment i have no money, however i have the beam at home and i can do another photo if i ask to a friend a digital cam. Well i'll go for it!

To Marvin:

i know that the term liquid dynamite it's a bit strange but i thought about the definition of dynamite. We can say that dynamite is a mixture of NG with another substance that can be active (explosive itself) or inert. NG is mixed with this substance to make it safer and more handle.

Now i started the idea of liquid dynamite because i want a liquid explosive to be used in shaped charges, this liquid should be more powerfull than plx, easy to make and more stable than other nitro esters.

If you think about this liquid dynamite we can say that it fits all these requirements and it can be called liquid dynamite because it is a mixture of NG with another substance that is active and the final product is more safer and handle than pure NG.

I like this mixture also because is a good homemade HE and it is an excellent way to stretch NG without loosing too much power and brisance.

About the stability i'm satisfied if it is shock stable, but about the chemical stability i can't say much because i had detonated it immediately.

Well i want to discover also this thing so i have prepared 16 gr of it and i'm storing it for 2 months...in january we'll see if it is chemically stable.

Long storage should be a good test...isn't it?

If NG is not very chemically stable with NM you can use EGDN instead of NG, EGDN is more stable in a acid environment and you will obtain a more powerfull liquid dynamite.

About blasting gelatine you said that NG/NC is not so safe because of the homemade NC...are you referring to the fact that NC is hard to neutralize?

Using smokeless powder or DBSP should solve this problem.

FinnBell

November 2nd, 2004, 08:38 PM

Well definitely borrow a camera cause Im dying to see these pics, Ive been working a lot with NG lately and its quickly becoming one of my favorite HES to work with, all the precursors are dirt cheap for me, so its even better. The only problem is space, I have nowhere to conduct "experiments". I have a few pics of a detonation that I'll have to post sometime too.

me234

November 4th, 2004, 05:42 AM

Marvin, there are exactly two things nuclearattack wants to accomplish: First and foremost: To find a liquid explosive suitable for shaped charges. See above post.

Secondly: Failing #1, to just make a kickass explosive that's fun to play around with. Who cares what good it is, as long as

it's usable, it's fun, and it's experimenting to gain more knowledge. Personally, I think nuclearattack must be having a really good time just experimenting with the stuff, even if the tests prove fruitless, which they don't seem to be.

Man, this place is all about the experimenting.

Nuclearattack, can you 'cook up' a few mixtures, each pretty small, and store them? Then every couple of months you take one out and try set it off after making observations. Maybe do this to try and find more or less when this mixture starts becoming unstable? This mixture sounds fascinating to me, and I'm thinking of trying myrol and NM. Anybody know of any reasons why I shouldn't, ignoring the legality of this dream of course.

nuclearattack

November 4th, 2004, 04:16 PM

To Me234:

yes man! This mixture is pretty funny and i think it is also practise.

However further investigations on it's stability is required and i have stored 3 small charges to study the stability of the solution during long storage.

I appreciated your idea of using more than 1 test charge to see changes after differents storing periods. Thanks for your contribute!

As you said we are here to experiment on HE compositions and this liquid dynamite has never been investigated before, so this is a good occasion to learn more!

I'll continue also with my demolition tests with liquid dynamite and i'll try to do the best to post good pictures.

One last thing: Me234 if you are tring to make myrol and you are experimenting on it please post your results on "EGDN,BLASTING GELATINE,MYROL" thread because i'm very interested in it!

Darkness

November 21st, 2004, 07:58 AM

Hi nuclearattack

i have tried this "liquid dynamite" and i must say that it is very powerfull.

I can say this because i made 3 tests to compare it's power:

first test was with 100gr of ammonia dynamite, the second with 100gr of pure NG and the third with 100gr of liquid dynamite. The 3 charges were in the same kind of confinement and the same detonators.

I placed the 3 charges on 3 steel plates 1cm thick and then i buried those test plates under 50 cm of earth.

The liquid dynamite was very brisant because it ripped the steel plate and moved a lot of earth, the ammonia dynamite also ripped the steel plate but less than liquid dynamite. Pure NG was the most brisant as expected.

I noticed that ammonia dynamite moved a bit more earth than pure NG and liquid dynamite probably because AN generates a lot of gas, liquid dynamite has a good brisance a bit more than ammonia dynamite but a bit less than NG.

After all i can say that liquid dynamite is between ammonia dynamite and pure NG from the output power point of view.

It's a very good homemade HE...my congratulations to you nuclearattack!

Now the most important thing is the stability, i'm waiting for your stability tests...good work!

nuclearattack

November 30th, 2004, 07:12 AM

After 26 days i checked the liquid dynamite sample on long storage...it's all normal as when i made it, i don't want to test it immediatly, i'll wait some days before another impact test. For the moment i don't notice changes in the compound but we'll see better after the test!

To Darkness:

your test is interesting! You are just a newbie but you started well your career! I think you have some experience with HEs! Good work!

nuclearattack

December 29th, 2004, 10:01 AM

Surprise! I finally bought a digital camera so i made some photos of the damaged steel beam i used to test my liquid straight dynamite. ;)

To Finnbell:

you wanted to see better pictures of this test? Here you are some photos! :D

If someone need larger pictures i can provide also bigger photos...you have only to ask! ;)

To NBK:

i tried to reduce the dimension of the photos, i hope i made a good work!

About the test keep in mind that i used only 130gr of liquid dynamite and that i didn't follow any professional method to

demolish the steal beam like the methods suggested in FM 5-250 or other blasting manuals. My target wasn't to cut the steal beam i only used it because i found it on the site, it was completely improvised, just only for fun! :cool:
I also placed the charge on the beam without tamping and beetween the beam and the terrain so the beam was thrown 200m away absorbing a part of the blast hit. If i had put the charge over the beam (not under it) and i had tamped it with earth following the FM 5-250 instructions probably the charge will be cutted or bended completely.
Note anyway the deep dent and the bended metal! It was 1cm thick!
I hope you'll like the photos! :D :D

Bert

December 29th, 2004, 02:03 PM

It's allways good to have something in the picture of a known size for scale- A Coke can, a ruler, pack of cigarettes...
Anything to give a visual reference to the size of what you're looking at.

The_Rsert

December 29th, 2004, 03:03 PM

Which programm for resizing have you used?

I'm using "Irfan View" to resize and to compress my pictures.
That's work much better for the comprimation.
You can reach a size of 640x480 at <20kb with a sufficient quality.

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